

IN THE CLAIMS

*Please amend and reconsider the claims as follows:*

Claims 1-7. (Canceled).

8. (Currently Amended) Surgical guide for performing a sinus elevation procedure on a specific patient's maxillary sinus by and penetrating a lateral bony wall [[of]] proximate a maxillary sinus of [[a]] the patient, said lateral wall having an external surface, and a varying length, height and depth extending along an X-axis, a Y-axis, and a Z-axis, respectively, said surgical guide comprising:

a curvilinear-shaped structure for placement adjacent to and in direct and continuous contact with the external surface of said lateral wall of the maxillary sinus, said curvilinear-shaped structure having a three-dimensional window configured for placement directly over a portion of said lateral wall of the maxillary sinus and to define a surgical site field to perform the sinus elevation, said window being sized to receive a dental bur and formed with by a patient-specific custom-shaped peripheral edge that defines an at least one elongated ledge having a length that extends in a direction along the X-axis of the lateral wall, the ledge having varying surface contours formed in X-Y and Z-X planes extending along the length to correspond to and align with surface contours formed in the X-Y and Z-X planes of the lateral wall at the surgical site, the ledge being configured to provide continuous contact with the lateral wall along its entire length at the surgical site, wherein the ledge includes a variable depth in the Z-X plane and is configured first thickness and at least a second thickness differing from the first thickness to directly correspond to thickness variations along the Z-X plane of a bony the patient's lateral wall, said window being sized greater than a diameter of the bur to permit movement, guidance and depth control of the bur in three-dimensions along the custom-shaped peripheral edge and surface contours of the window lateral to said maxillary sinus, the peripheral edge further including differing surface contours that correspond to and align with uniquely shaped contours formed along surface portions of the wall defining the maxillary sinus and maxillary bone of the patient.

9. (Currently Amended) The surgical guide of claim 8, wherein said curvilinear-shaped structure includes:

a lower portion having a custom-fabricated surface configured for positioning in intimate contact with and over an alveolar ridge of the maxillary bone and/or adjacent teeth of said patient; and

an upper portion extending upward from said lower portion for positioning adjacent to and in direct contact with said lateral wall of the maxillary sinus in proximity to define said surgical field site.

10. (Canceled).

11. (Canceled).

12. (Currently Amended) The surgical guide of claim 8, wherein said curvilinear-shaped structure is custom-fabricated from an acrylic material.

13. (Currently amended) The surgical guide of claim 8, wherein said window is substantially rectangular in shape at least one elongated ledge includes at least one of having a lower inferior ledge portion having a surface shaped to correspond corresponding in shape to an inferior portion of the patient's sinus, an anterior a mesial ledge portion having a surface shaped to correspond corresponding to an anterior a mesial portion of the patient's sinus, a posterior ledge portion having a surface shaped to correspond corresponding to a posterior portion of the patient's sinus, and a or an upper superior ledge portion having a surface shaped to correspond corresponding to a superior portion of the patient's sinus, each of said inferior, mesial anterior, posterior and superior ledge portions defining an a customized outline guide which corresponds specifically to the surgical site for penetrating the lateral wall of the patient's maxillary sinus.

14. (Currently amended) The surgical guide of claim 8, wherein said custom-shaped peripheral edges edge defining the window provide an extends from a posterior wall to an anterior wall along the X-Y plane, and the at least one elongated ledge has a customized thickness along the Z-X plane and the Z-Y plane that corresponds to thickness variations along the Z-X plane and the Z-Y plane outline of a coronal, anterior, posterior and apical aspect along an X-Y plane of the patient's lateral wall of the maxillary sinus.

15. (Currently amended) The surgical guide of claim 8, wherein said custom-shaped peripheral edges edge defining the window provide an extends from a lower inferior wall to an upper superior wall along the X-Y plane, and the at least one elongated ledge has a customized thickness along the Z-X plane and the Z-Y plane that corresponds to thickness variations along the Z-X plane and the Z-Y plane outline along a Z-Y plane and Z-X plane of the patient for penetrating of the patient's lateral wall of the maxillary sinus.

16. (Currently amended) The surgical guide system of claim 29, wherein said treatment plan comprises at least one of a panoramic, coronal, sagittal and three-dimensional view of the maxillary sinus and maxillary bone structures of said patient.

17. (Currently amended) The surgical guide of claim 30, wherein said cutting device is a bur comprising comprises:

an elongated shaft having opposing first and second ends, said first end configured for insertion into a rotary device;

a cutting blade coupled to the second end of said shaft; and

a depth guide extending transversely from said shaft and spaced a predetermined distance from a distal end of said cutting blade.

18. (Currently amended) The surgical guide of claim 17, wherein said depth guide traverses said shaft a distance in a range of approximately 5-10 mm from the distal end outer edge of the cutting device blade.

19. (Currently amended) The surgical guide of claim 17, wherein said depth guide is configured to interface with and traverse along said ledge of said window of the curvilinear-shaped structure.

Claims 20-22. (Canceled).

23. (Currently Amended) A method of performing sinus elevation surgery to penetrate a bony lateral wall [[of]] proximate a maxillary sinus of a specific patient, comprising:

providing a treatment plan having three-dimensional images which characterizes characterize a plurality of bony walls including the lateral wall defining a portion of the maxillary sinus and maxillary bone structures of said patient, said plurality of walls having dimensions, shape, and contours formed along surface portions of the walls that are unique to the patient; and

providing a customized surgical guide based on said treatment plan for placement adjacent to and in direct contact with said lateral wall of the patient's maxillary sinus, said guide having a three-dimensional window that defines a surgical field site, said window being configured to receive and sized greater than a dental bur which is used to penetrate the lateral wall, said window formed by a customized peripheral edge defining an elongated a customized ledge that is elongated in shape, said ledge further and including customized surface contours that are positioned to correspond to and align with the uniquely shaped contours formed along external surface portions of the walls defining the maxillary sinus and maxillary bone structures lateral wall, the length of the ledge being configured for continuous contact in its entirety with the lateral wall at the surgical site of the patient based on said treatment plan, said ledge having a customized thickness to guide and control the depth of penetration of the distal end of the bur while the bur moves in three dimensions along the elongated ledge.

24. (Currently Amended) The method of claim 23, further comprising:

fixedly placing said customized surgical guide over a portion of an alveolar ridge and/or adjacent teeth, and a portion of a lateral wall of the maxillary sinus of said patient after reflection of a corresponding overlying buccal mucosa; and

cutting a portion of said maxillary bone at the surgical site defined by the window by guiding using a bur traversing the bur along the customized ledge forming said window.

25. (Currently Amended) The method of claim 24, further comprising providing a bone graft graph in a portion of the maxillary bone and sinus as defined in the treatment plan.

26. (Currently Amended) The method of claim 24, wherein said cutting step comprises:

providing [[a]]the bur [[having]]with a depth guide set a predetermined distance from a distal end of a cutting blade of the bur based on results of the maxillary sinus and thickness of the maxillary bone structures of said patient acquired during said treatment plan.

27. (Currently amended) The method of claim 24, wherein said placing step further comprises:

securing said surgical guide over an alveolar ridge and/or adjacent teeth and lateral wall of the maxillary sinus, such that a lower inferior ledge portion of said window of the surgical guide is aligned at a floor portion of the sinus with a positive seat, regardless of variations in height of said floor portion.

28. (Currently amended) The method of claim 23, wherein said providing a surgical guide comprises[[:]] fabricating ~~a curvilinear-shaped structure~~ the customized surgical guide having said three-dimensional window from an acrylic material.

29. (Currently amended) A surgical guide system for performing a sinus elevation procedure by penetrating an outer surface of an irregularly-shaped lateral wall of a maxillary bone forming a maxillary sinus of a specific patient, the system comprising:

The surgical guide of claim 8, further comprising a treatment plan including a CT-scan and three-dimensional images which characterize a plurality of walls defining the maxillary sinus and maxillary bone structures of the patient, said plurality of walls having irregular dimensions, shapes, and contours formed along surface portions of the walls that are unique to each the patient, said lateral wall having a length extending along an X-axis, a height extending along a Y-axis, and a depth extending along a Z-axis, said lateral wall having a convex-shape extending along the X-axis; a curvilinear-shaped structure having a three-dimensional window for placement directly over a portion of the outer surface of the patient's lateral wall of the maxillary bone to define a surgical site to perform the sinus elevation, said window being sized to receive a dental bur and formed with a customized peripheral edge that defines at least one elongated ledge having a length that extends along the X-axis of the lateral wall, the elongated ledge being concave in shape at least along its inner surface and along the X-axis, and having a surface contour that interfaces with and conforms to a surface contour of the convex-shaped lateral wall of the patient, wherein said elongated ledge is configured for continuous contact along its entire length with the lateral wall at the surgical site; said elongated ledge having a customized variable depth along the Z-axis which corresponds to and aligns with thickness variations of the patient's lateral wall, said window being sized greater than a diameter of the bur to permit movement, guidance and depth control of the bur in three-dimensions along the customized peripheral edge and surface contours of the window; and wherein the curvilinear-shaped structure and window are customized in shape and dimension to conform to the unique and irregularly-shaped and dimensioned lateral wall of the patient's maxillary bone at the surgical site, as determined by the CT-scan and three-dimensional images of the treatment plan.

30. (Currently amended) The surgical guide system of claim [[8]]29, ~~further comprising wherein the bur is a cutting device configured to trace and cut the lateral wall at the surgical site while in contact and moving along the ledge of the window.~~

Claims 31-34. Canceled.

35. (New) The surgical guide of claim 8, wherein said at least one elongated edge extending in a direction along the X-axis is concave in shape.

36. (New) The surgical guide of claim 35, wherein said at least one elongated edge extending in a direction along the X-axis has a surface contour that mimics a surface contour of the lateral wall, wherein the lateral wall of the patient is a convex-shaped lateral wall.

37. (New) The surgical guide of claim 8, wherein said variable depth in the Z-X plane along the length of the elongated edge provides depth control for penetrating the lateral wall with the bur.

38. (New) The method of claim 23, wherein the lateral wall of the patient is convex in shape, said providing the customized surgical guide based on said treatment plan further comprising the step of configuring the elongated ledge with a concave shape to mimic and overlay a portion of the convex-shaped lateral wall, wherein said elongated ledge is configured for continuous contact along its entire length with said adjacent lateral wall at the surgical site.